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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,313	08/31/2001	Marc G. Brun	SP01-238	2735

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EXAMINER
WOOD, KEVIN S

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 03/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/945,313	BRUN ET AL.
	Examiner	Art Unit
	Kevin S Wood	2874

-- The MAILING DATE of this communication appears on th cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *18* is/are allowed.

6)☒ Claim(s) *1-17 and 19-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3,5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

Brian Healy
Primary Examiner

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-7, 9-17, and 19-25 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,433,924 to Sommer.

Referring to claim 1, Sommer discloses all the limitations of the claimed invention. Sommer discloses an optical package, including: a ferrule (12) comprising at least one capillary extending axially through the ferrule; at least two pair of optical fibers (20,22,24,26) extending through the at least one capillary (44), the fibers comprising a first input fiber (20), a first reflected fiber (24), a second input fiber (22) and a second reflected fiber; an optical filter (52) optically aligned with the optical fibers such that a first wavelength of optical signals transmitted through the first input fiber are reflected by the filter to the first reflected fiber and a second wavelength of optical signals transmitted through the second input fiber are reflected by the filter to the second

reflected fiber. See Fig. 1A-E. It is inherent within the invention of Sommer that the optical fibers meet pre-determined tolerances for certain characteristics, such as core concentricity, ovality, and diameter.

Referring to claim 3, Sommer discloses all the limitations of the claimed invention. Sommer discloses that the optical filter acts as a bandpass filter, allowing certain wavelengths to pass through, while others are reflected. See col. 6, lines 25-31.

Referring to claim 4, Sommer discloses all the limitations of the claimed invention. Sommer discloses that the first reflected optical fiber (24) can be coupled to the second input optical fiber (22). See Fig. 1A.

Referring to claim 5, Sommer discloses all the limitations of the claimed invention. Sommer discloses that the first reflected optical fiber (24) can be coupled to the second input optical fiber (22) through optical fiber (30). See Fig. 1A.

Referring to claim 6, Sommer discloses all the limitations of the claimed invention. Sommer discloses that the first reflected optical fiber (24) can be coupled to the second input optical fiber (22) through optical fiber(30) which includes amplifier (58). See Fig. 1A.

Referring to claim 7, Sommer discloses all the limitations of the claimed invention. Sommer discloses an optical package that also includes an output ferrule (14) comprising a capillary extending axially through the ferrule and a transmitted fiber (34) extending through the output ferrule capillary, where the transmitted fiber is coupled to the first input fiber (10). See Fig. 1A.

Referring to claim 9, Sommer discloses all the limitations of the claimed invention. Sommer discloses an optical package that also includes energy dissipating device (30) coupled to the transmitted fiber (34). It is inherent that some energy is dissipated when light is passed through the optical fiber (34). Light cannot be transmitted though a length of fiber without some loss of energy.

Referring to claim 10, Sommer discloses all the limitations of the claimed invention. Sommer discloses an multiple-port optical package, including: a ferrule (12) comprising at least one capillary extending axially through the ferrule; at least two pair of optical fibers (20,22,24,26) extending through the at least one capillary (44), the fibers comprising a first input fiber, a first reflected fiber, a second input fiber and a second reflected fiber; an optical filter (52) optically aligned with the optical fibers such that a first wavelength of optical signals transmitted through the first input fiber are reflected by the filter to the first reflected fiber and a second wavelength of optical signals transmitted through the second input fiber are reflected by the filter to the second reflected fiber; an output ferrule (14) comprising at least one output capillary extending axially through the ferrule; and at least two output fibers (28,30,32,34) extending through eh at least one output capillary and receiving light signals transmitted through the filter. See Fig. 1A-E. It is inherent within the invention of Sommer that the optical fibers meet pre-determined tolerances for certain characteristics, such as core concentricity, ovality, and diameter.

Referring to claim 11, Sommer discloses all the limitations of the claimed invention. Sommer discloses that the output optical fibers comprise a first output fiber

and a second output fiber, where the first output fiber is in optical communication with the first input fiber and the second output fiber is in communication with the second input fiber. See Figures.

Referring to claim 12, Sommer discloses all the limitations of the claimed invention. Sommer discloses that the output optical fibers comprise a first output fiber and a second output fiber, where the first output fiber is in optical communication with the first reflected fiber and the second output fiber is in communication with the second reflected fiber. See Figures.

Referring to claim 13, Sommer discloses all the limitations of the claimed invention. Sommer discloses that the output optical fibers comprise a first output fiber and a second output fiber, where the first output fiber is in optical communication with the first input fiber and the second output fiber is in communication with the second reflected fiber. See Fig. 1A.

Referring to claim 14, Sommer discloses all the limitations of the claimed invention. Sommer discloses at least one reflected fiber is coupled to an energy-dissipating device (16). It is inherent that some energy is dissipated when light is passed through the lens (16). Light cannot be transmitted though a lens without some loss of energy.

Referring to claim 15, Sommer discloses all the limitations of the claimed invention. Sommer discloses at least two reflected fibers are coupled to an energy-dissipating device (16). It is inherent that some energy is dissipated when light is

passed through the lens (16). Light cannot be transmitted though a lens without some loss of energy.

Referring to claim 16, Sommer discloses all the limitations of the claimed invention. Sommer discloses at least one output fiber is coupled to an energy-dissipating device (18). It is inherent that some energy is dissipated when light is passed through the lens (18). Light cannot be transmitted though a lens without some loss of energy.

Referring to claim 17, Sommer discloses all the limitations of the claimed invention. Sommer discloses at least two output fibers are coupled to an energy-dissipating device (18). It is inherent that some energy is dissipated when light is passed through the lens (18). Light cannot be transmitted though a lens without some loss of energy.

Referring to claims 19-20, Sommer discloses all the limitations of the claimed invention. Sommer discloses an multiple-port add/drop package, including: an optical filter (52); a first input fiber (84); a first reflected fiber (88) optically coupled with the first input fiber via a light signal reflected by the optical filter; a second input fiber (86); a second reflected fiber (90) optically coupled with the second input fiber via a light signal reflected by the optical filter; and a third input fiber (94) optically coupled to the first reflected fiber via a light signal transmitted through filter. See Figure 2B.

Referring to claim 21, Sommer discloses all the limitations of the claimed invention. Sommer discloses a first transmitted fiber (68) optically coupled to the first input fiber (84). See Figure 2B.

Referring to claim 22, Sommer discloses all the limitations of the claimed invention. Sommer discloses a second transmitted fiber (74) optically coupled to the second input fiber (84). See Figure 2B.

Referring to claims 23, Sommer discloses all the limitations of the claimed invention. Sommer discloses an multiple-port add/drop package, including: an optical element (52); a first input fiber (84); a first reflected fiber (88) optically coupled with the first input fiber via a light signal reflected by the optical element; a second input fiber (86); a second reflected fiber (90) optically coupled with the second input fiber via a light signal reflected by the optical element; and a first transmitted fiber (68) optically coupled to the first input fiber (84). See Figure 2B.

Referring to claim 24, Sommer discloses all the limitations of the claimed invention. Sommer discloses a second transmitted fiber (74) optically coupled to the second input fiber (84). See Figure 2B.

Referring to claim 25, Sommer discloses all the limitations of the claimed invention. Sommer discloses a third input fiber (94) optically coupled to the first reflected fiber via a light signal transmitted through the optical element. See Figure 2B.

3. Claims 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,917,626 to Lee.

Referring to claims 26, Lee discloses all the limitations of the claimed invention. Lee discloses an optical device, including: a first input fiber (801); a second input fiber (802); a third input fiber (803); an optical element (832) in communication with the first,

second and third fibers; a first transmitted fiber (811) optically coupled with the first input fiber through the optical element; a second transmitted fiber (812) optically coupled with the second input fiber through the optical element; and a third transmitted optical fiber (813) optically coupled through the third input fiber. See Figure 8A.

Referring to claim 27, Lee discloses all the limitations of the claimed invention. The optical element of the Lee invention is clearly acting as a type of splitter, because it is splitting the input signals into separate wavelengths.

Referring to claim 28, Lee discloses all the limitations of the claimed invention. Lee discloses a fourth input fiber (804) and a fourth output fiber (814). See Figure 8A.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,433,924 to Sommer.

Referring to claims 2, Sommer discloses all the limitations of the claimed invention, except Sommer does not appear to specifically disclose that the collimating lens (16) maybe an aspheric lens. It is known in the art that aspheric lenses can be used within optical devices for the purpose of collimating light. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize an aspheric lens as the collimating lens within the device of Sommer, for the purpose of collimating the light signals.

Referring to claims 8, Sommer discloses all the limitations of the claimed invention, except Sommer does not appear to specifically disclose that the collimating lens (18) maybe an aspheric lens. It is known in the art that aspheric lenses can be used within optical devices for the purpose of collimating light. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize an aspheric lens as the collimating lens within the device of Sommer, for the purpose of collimating the light signals.

Allowable Subject Matter

7. Claim 18 is allowable.

8. The following is a statement of reasons for the indication of allowable subject matter:

Referring to claim 18, the prior art does not disclose all the limitations of the claimed invention. The prior art does not disclose an add/drop optical module including a first and second six-port optical packages where the first reflected fiber of the first package is coupled to the first input fiber of the second package.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S Wood whose telephone number is (703) 605-5296. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 307-0956.

Kevin S. Wood
March 16, 2003

Brian Healy
Primary Examiner